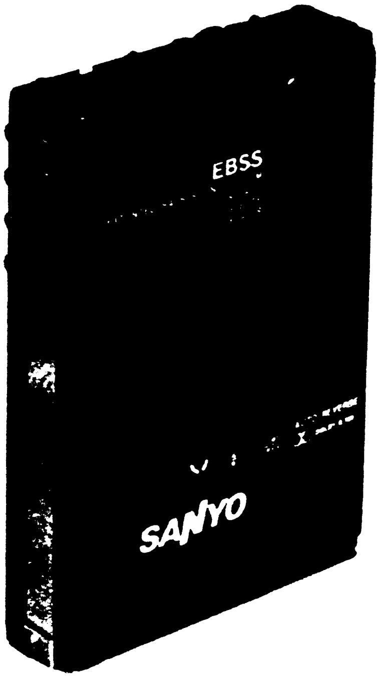
SANYO

Service Manual

Stereo Cassette Player

JJ-P5 (EUROPE)



PRODUCT CODE No.
142 473 70 (Black)
142 473 71 (White)
142 473 72 (Red)

SPECIFICATIONS

Power Source	
DC	1.5V
Ni-cd battery	NB-600
or (UM-3, HP 7, AA Cell, Mignonzelle, R 6) x 1	
Output Power	5mW x 2 (Max.)
Current Consumption (at Vol. Min.)	
Playback mode	180mA
Fast Forward/Rewind mode	300mA
Tape Speed	1-7/8ips. ±3%
Fast Forward/Rewind Time	200sec. (with C-60)
Torque	
Playback	25 ~ 40g-cm
Fast Forward/Rewind	More than 45g-cm

Wow & Flutter	0.6%, RMS
Frequency Response (P/B Dolby OFF)	
Fe_2O_3	63Hz ~ 10,000Hz
EBSS/BRSS Switch: ON (at 63Hz)	+17dB ±5dB
Signal to Noise Ratio (w/Fe_2O_3)	More than 42dB
Crosstalk (w/Fe_2O_3)	
Track to Track	More than 50dB
Channel Separation (w/Fe_2O_3)	More than 30dB
Hum & Noise (at Vol. Min.)	−70dBs
Terminal Impedance	
Headphones	8 ~ 100Ω
Dimensions (Max.)	69.8(W) x 104.5(H) x 18.5(D)mm
Weight (w/o batteries)	138g

Specifications subject to change without notice.

REFERENCE No. WM-221 26

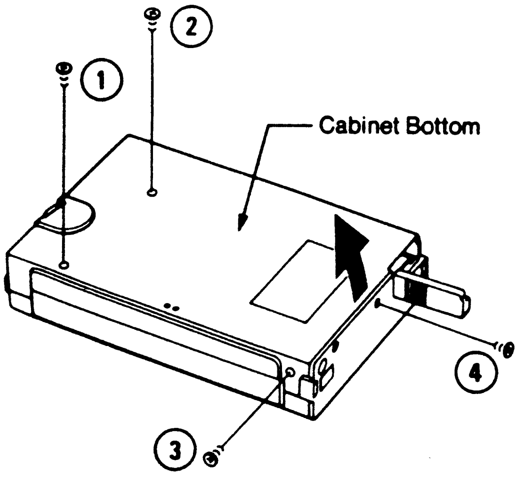
DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

- Before disassembling the unit, spread a soft rubber mat or a cloth on the workbench to avoid scratches and grease stains.
- Do not use a material which is likely to cause static electricity because transistors and ICs may be easily damaged by it.
- Reassemble the unit, noting the kinds of screws, the soldering and arrangement of the leads. Refer to "Circuit Diagram and Exploded Views" for correct assembly.
- Before disassembling the unit, take out the cassette tape and the batteries.
- Reassemble in reverse order.

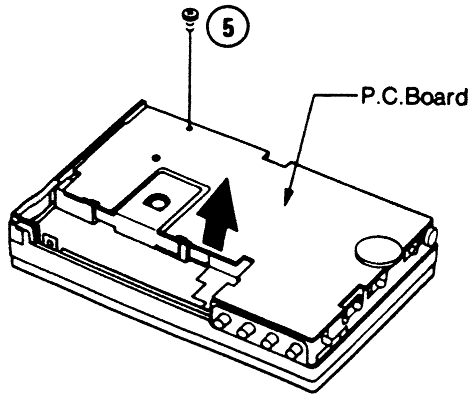
CABINET BOTTOM REMOVAL

1. Remove the four screws (1 ~ 4) fastening the CAbinet Bottom and open the battery compartment lid.
2. Detach the Cabinet Bottom by lifting it in the direction of the arrow.



P.C.BOARD REMOVAL

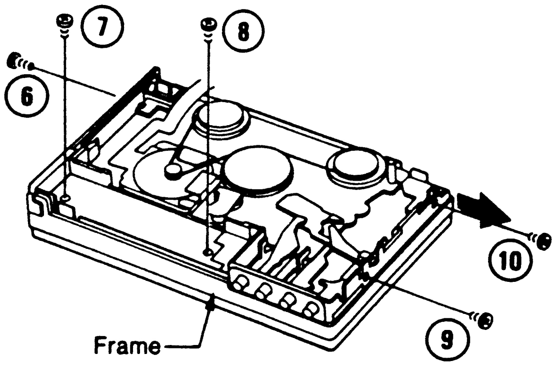
1. Detach the Cabinet Bottom, and unsolder the lead wires (black and red) from the battery terminals and the Reverse switch leads (red and blue) from the switch.
2. Remove the screw (5) detach the P.C.Board by lifting it in the direction of the arrow.



3. Turn over the P.C.Board toward the back of the unit with caution not to damage the FPCs of the Motor and Head.

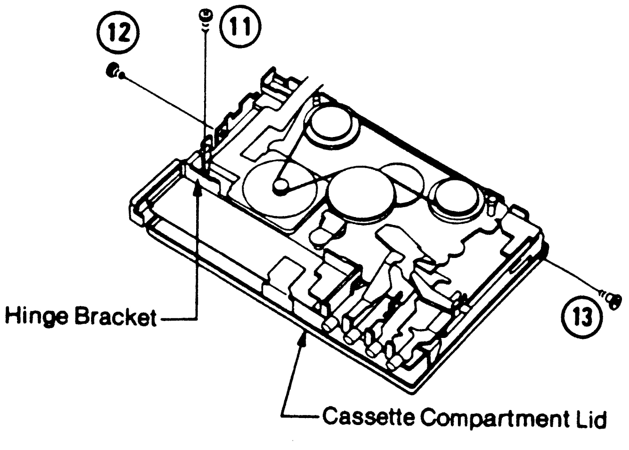
FRAME REMOVAL

1. Detach the P.C.Board, and remove the five screws (6 ~ 10).
2. Detach the Frame by pulling it in the direction of the arrow.



CASSETTE LID REMOVAL

1. Detach the P.C.Board and Frame adn remove the screw (11) to detach the Hinge Bracket.
2. Remove the two screws (12 and 13) and detach the Cassette Compartment Lid after opening the Lid by pressing the STOP/EJECT button.



ADJUSTMENT PROCEDURES

GENERAL REMARKS

- Before adjusting the mechanism of this unit, wipe the tape contacting surfaces clean as well as the contacting surfaces of the driving parts with a cotton swab or a soft cloth soaked in alcohol. Trouble may occur because of oil and grease stains.

- Handle the belt carefully the because grease easily attaches to it. Then check the used rubber parts. If the rubber has deteriorated or is scratched, replace the parts with new one.

- This model features the Auto Reverse Mechanism. Then the tape transport direction is distinguished as follows:
  - **FORWARD DIRECTION:**
    The tape is wound counter-clockwise.
  - **REVERSE DIRECTION:**
    The tape is wound clockwise.

- When performing the adjustment while playing back the test tape, set the tape transport to the **FORWARD DIRECTION**.

EQUIPMENT REQUIRED

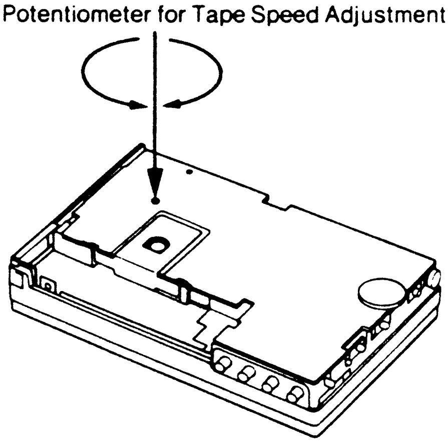
- Frequency Counter
- Dualtrace Oscilloscope
- VTVM (2 sets)
- Dummy Load (16Ω)
- Test Tapes
  - 3kHz test tape (Example: TEAC MTT-111)
  - 10kHz test tape (Example: A·BEX TCC-153)
- Alignment Tool

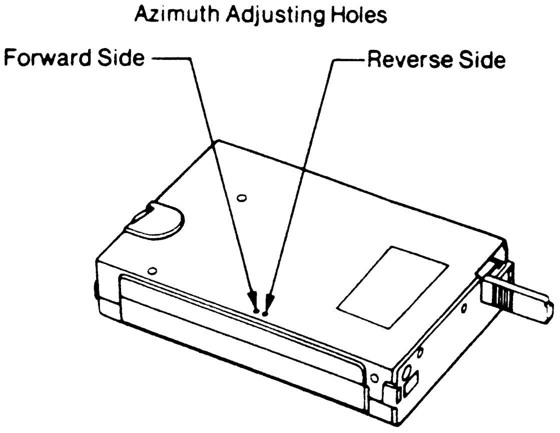
NOTE:
Before the Adjustments, set the control and switch as follows:

- Dolby NR Switch .... OFF
- EBSS/BRSS Switch .... OFF
- Volume Control .... As desired
- Supply the regulated DC 1.5V power to the Ext. Power Jack for the adjustment.

▪ ADJUSTMENT PROCEDURE

Adjustment Item	**Connection**	**Dummy Load**	**Measuring Instrument**	**Test Tape**	**Adjustment**	**Measuring Value**
Tape Speed	Headphones	16Ω	Frequency Counter	TEAC MTT-111	P401	3,000Hz ±3%
Head Azimuth			VTVM	A·BEX TCC-153	Azimuth Screw	Maximum
			Oscilloscope			Maximize two waveforms in phase.

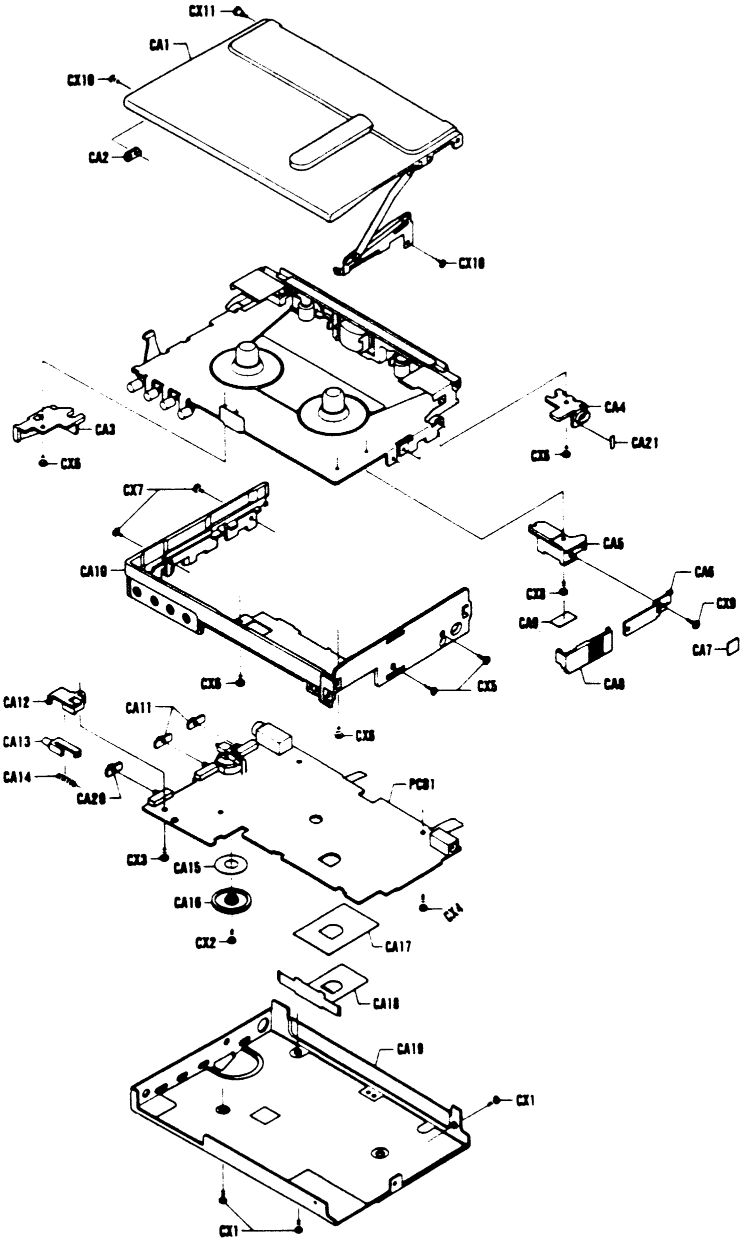




PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	141-6-1469-37800	Case Styrofoam	1
	141-6-1479-02500	Individual Carton	1
	141-6-2519-05011	Poly Cover 50 X 110 (Ni-cd Battery)	1
	141-6-2519-12490	Poly Cover (C-Case/Unit)	2
	141-6-3919-63600	Plain Pad	1
	141-6-3919-63700	Plain Pad	1
	141-6-4559-03305	Serial No. Sheet	3
	141-6-4559-04111	Label Color (Black)	1
	141-6-4559-04107	Label Color (White)	1
	141-6-4559-04109	Label Color (Red)	1
	ACCESSORIES		
	4-1529-70850	Headphone Assy (Black/Red) 07 E9 263	1
	4-1529-70852	Headphone Assy (White)	1
	141-2-4469-56201	Ear Pad	2
	4-1919-72134	AC Charger 1.5CV220N	1
	4-2352-03010	Case Battery Socket (Black)	1
	4-2352-03011	Case Battery Socket (White)	1
	4-2352-03013	Case Battery Socket (Red)	1
	4-6629-70270	Ni-cd Battery NB600	1
	141-0-1769-01900	Head Band Assy	1
	141-2-1819-21000	Case Carrying	1
	141-6-4729-37901	Label Case Battery	1
	141-6-4729-37941	Label Caution Batt	1
	142-6-4119-33865	Sheet Inst	1
	142-6-4119-33965	Instruction Book	1
	CABINET		
CA 1	141-0-1249-48113	Lid Cassette Assy (Black)	1
CA 1	141-0-1249-48114	Lid Cassette Assy (White)	1
CA 1	141-0-1249-48115	Lid Cassette Assy (Red)	1
CA 2	141-2-2529-11600	Lock Plate	1
CA 3	141-0-2149-04800	Bracket Termi Assy	1
CA 4	141-2-2149-33000	Holder Socket	1
CA 5	141-0-2149-04900	Bracket Hinge Assy	1
C/	141-2-2519-07100	Hinge	1
CA /	141-2-4469-63300	Sheet	1
CA 8	141-2-1339-41600	Cap Battery (Black)	1
CA 8	141-2-1339-41601	Cap Battery (White)	1
CA 8	141-2-1339-41603	Cap Battery (Red)	1
CA 9	141-2-4359-49600	Sheet	1
CA10	141-0-1149-19200	Frame Assy (Black)	1
CA10	141-0-1149-19201	Frame Assy (White)	1
CA10	141-0-1149-19203	Frame Assy (Red)	1
CA11	141-2-1649-53300	Knob Slide (Tape/Dolby) (Black/Red)	2
CA11	141-2-1649-53301	Knob Slide (Tape/Dolby) (White)	2
CA12	141-2-2419-40100	Holder Knob DIR	1
CA13	141-2-8559-19700	Spring Direction	1
CA14	141-2-1669-20200	Knob Direction	1
CA15	141-2-4359-48800	Sheet	1
CA16	141-2-1639-66700	Knob Volume (Black)	1
CA16	141-2-1639-66701	Knob Volume (White/Red)	1
CA17	141-2-4359-49200	Insulator	1
CA18	141-2-3229-66800	Shield Motor	1
CA19	141-0-1129-41117	Cabinet Bottom Assy (Black)	1
CA19	141-0-1129-41118	Cabinet Bottom Assy (White)	1
CA19	141-0-1129-41119	Cabinet Bottom Assy (Red)	1
CA20	141-2-1649-53306	Knob Slide (EBSS)	1
CA21	141-2-4359-35200	Sheet	1
PCB1	141-0-1939-30150	Amplifier P.C.B. Assy	1
CX 1	411 0997908	SCR PAN PCS 1.4X2.5 (Black/Red)	3

CABINET EXPLODED VIEW



Ref. No.	Part No.	Description	Q'ty
CX 6	412 020 2801	SPECIAL SCREW	4
CX 7	141-2-4219-24100	Screw +PMS M1.4X1.4	3
CX 8	141-2-4219-26700	Screw +PMS M1.4X2	1
CX 9	141-2-4219-28401	Screw +PMS M1.4X2.5	1
CX10	412 022 4704	SCR FLT PCS 1.4X1.6	1
CX11	412 020 2702	SPECIAL SCREW	1

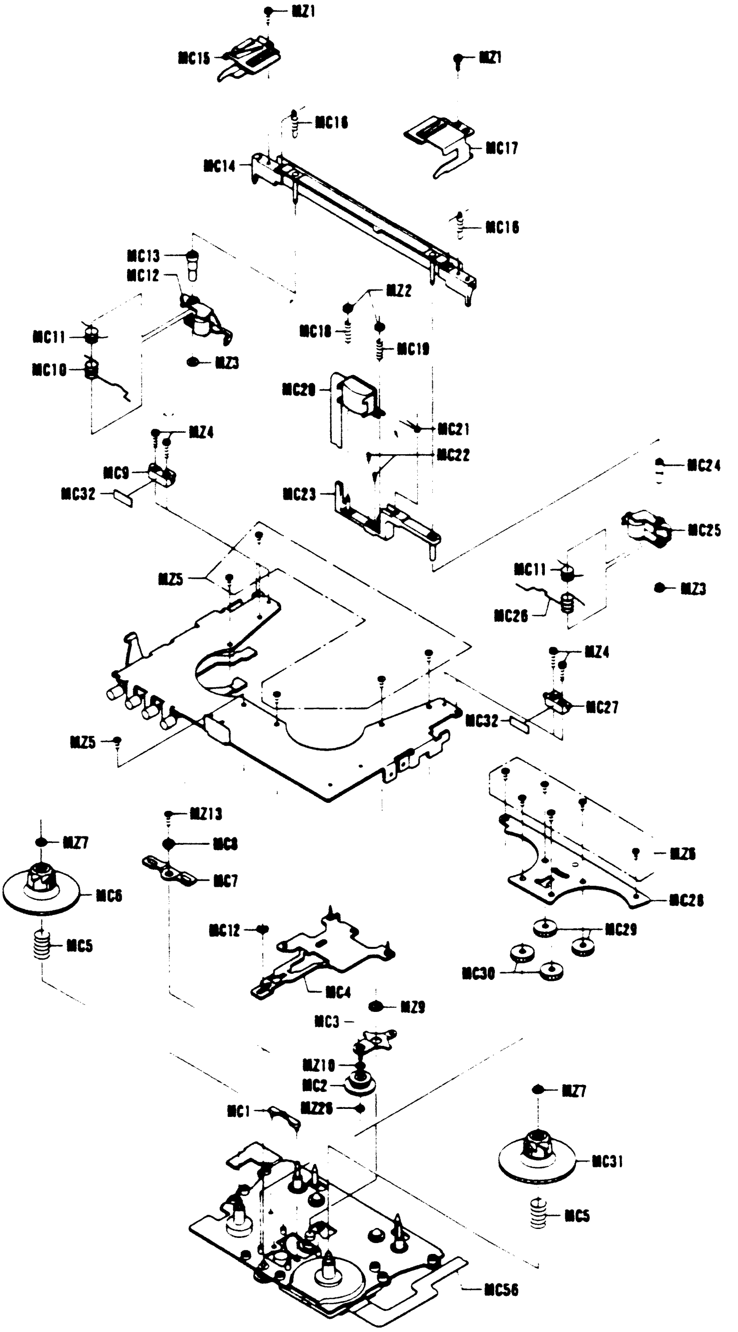
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

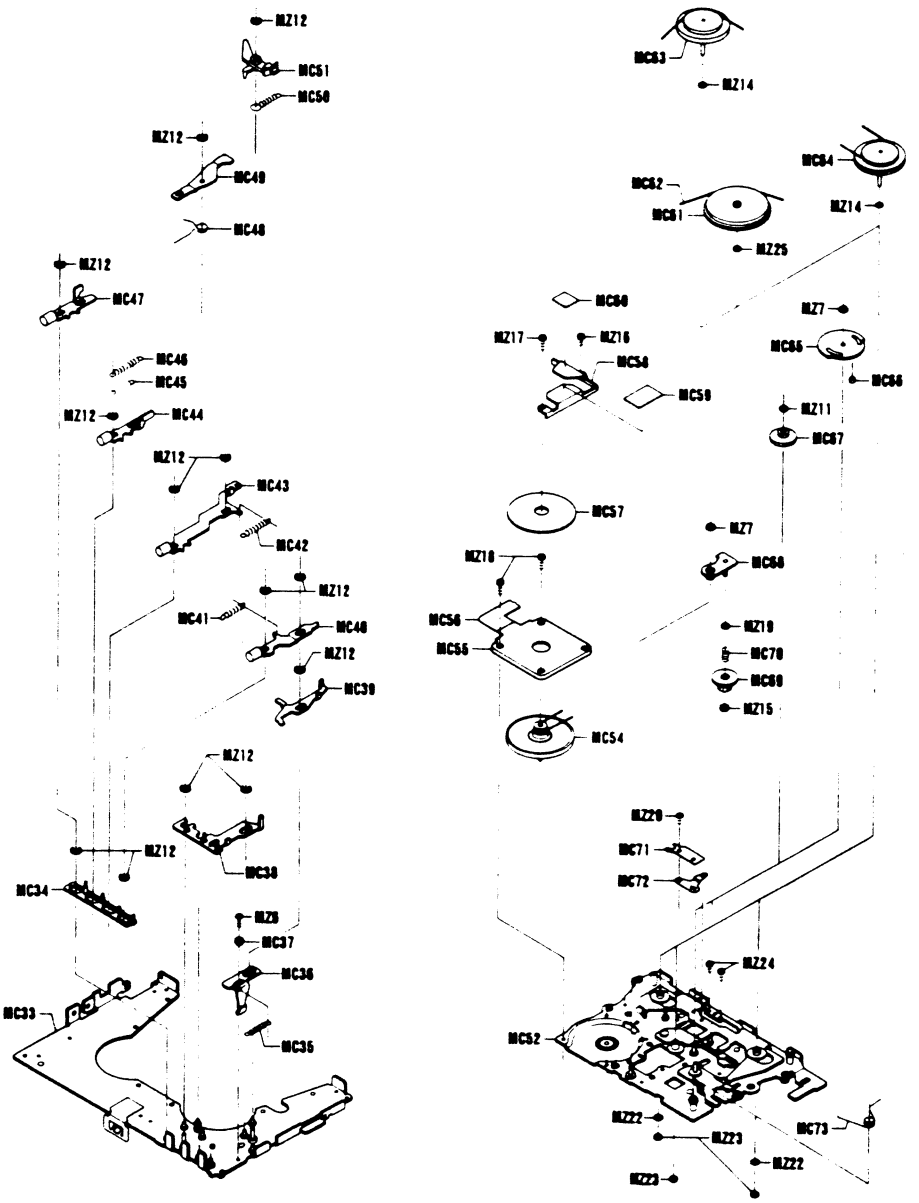
MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	CASSETTE MECHANISM		
	141-2-2899-13900	Adhesive Sheet (for Head FPC,L)	1
	141-2-2899-23300	Adhesive Sheet (for Head FPC,S)	1
	141-2-2899-19000	Adhesive Sheet (for Motor FPC)	1
MC 1	141-2-3519-85801	Plate Trig Pinch	1
MC 2	141-0-5519-15001	Gear Friction Assy	1
MC 3	141-0-5559-08400	Arm Change Assy	1
MC 4	141-0-7319-36801	Base Slide Assy	1
MC 5	141-2-8559-04000	Spring Switch	2
MC 6	141-0-5519-15200	Gear Reel FWD Assy	1
MC 7	141-2-7439-56900	Arm Play	1
MC 8	141-2-3529-54300	Spacer Arm Play	1
MC 9	141-2-2529-11300	Fix Holder R	1
MC10	141-2-8529-42500	SPG Pinch FWD	1
MC11	141-2-8529-42600	Spring Arm Pinch	2
MC12	141-0-5459-03600	Arm Pinch FWD Assy	1
MC13	141-2-5469-04500	Roller Pinch FWD	1
MC14	141-0-3519-27000	Holder Head Assy (Black)	1
MC14	141-0-3519-27001	Holder Head Assy (White/Red)	1
MC15	141-2-8539-62400	Holder R	1
MC16	141-2-8549-41600	Spring Holder Head	2
MC17	141-2-8539-62500	Holder L	1
MC18	141-2-8559-18900	Spring	1
MC19	141-2-8559-19100	Spring	1
MC20	4-2429-73350	Play Head Assy [HD1]	1
	4-2262-35080	FPC Head	1
	4-2429-73360	Play Head	1
MC21	141-2-8529-42400	Spring Arm Base	1
MC22	141-2-7539-91100	Pin Azimuth	2
MC23	141-0-7439-21300	Arm Base Assy	1
MC24	141-2-5469-04600	Roller Pinch REV	1
MC25	141-0-5459-03700	Arm Pinch REV Assy	1
MC26	141-2-8529-42700	SPG Pinch REV	1
MC27	141-2-2529-11200	Fix Holder L	1
MC28	141-2-3169-34800	Panel Chassis	1
MC29	141-2-5519-76500	Gear Idle	2
MC30	141-2-5519-76501	Gear Idle	2
MC31	141-2-5519-75600	Gear Reel REV	1
MC32	141-2-4359-54300	Sheet	2
MC33	141-0-3129-02601	Chassis Frame Assy	1
MC34	141-0-7539-00200	Plate Lock Assy	1
MC35	141-2-8549-42400	Spring Lid Lock	1
MC36	141-2-7319-88800	Plate Lock Lid	1
MC37	141-2-3529-54500	Spacer Lock Lid	1
MC38	141-0-7539-00100	Plate Switch Assy	1
MC39	141-2-7429-07300	Lever Eject	1
MC40	141-0-7359-02100	Rod Stop Assy (Black/White)	1
MC40	141-0-7359-02101	Rod Stop Assy (Red)	1
MC41	141-2-8549-12800	Spring Lever Play	1
MC42	141-2-8549-04000	Spring Lever Stop	1
MC43	141-0-3759-02000	Rod Play Assy (Black/White)	1
MC43	141-0-3759-02001	Rod Play Assy (Red)	1
MC44	141-0-7359-01900	Rod Fast Assy (Black/White)	1
MC44	141-0-7359-01901	Rod Fast Assy (Red)	1
MC45	141-2-8549-18000	Spring Arm Gear	1
MC46	141-2-8519-60600	Spring Tension	1
MC47	141-0-7359-02000	Rod Rewind Assy (Black/White)	1
MC47	141-0-7359-02001	Rod Rewind Assy (Red)	1
MC48	141-2-8529-42800	Spring Rod Fast	1
MC49	141-2-7439-57000	Arm Shut Off	1
MC50	141-2-8549-41500	Spring	1
MC51	141-2-7439-57100	Arm Mode (Black/Red)	1
MC51	141-2-7439-57101	Arm Mode (White)	1
MC52	141-0-3119-28201	Chassis Assy	1
MC54	141-0-3799-01700	Rotor Comple	1
MC55	4-2649-70912	Coil Assy	1
or	4-2649-70910	Coil Assy	1
MC56	4-2262-35090	FPC Motor	1
MC57	141-2-3799-04600	Plate Back-up	1
MC58	141-2-3169-35200	Shield Motor	1
MC59	141-2-4359-49500	Sheet	1
MC60	141-2-4359-49400	Sheet	1
MC61	141-0-6619-00600	Pulley Assy	1
MC62	141-2-5649-31000	Belt Drive	1
MC63	141-2-5219-24500	Flywheel REV	1
MC64	141-2-5219-24400	Flywheel FWD	1
MC65	141-2-5519-76200	Gear Reverse	1
MC66	141-2-8259-15100	Roller REV	1
MC67	141-2-5519-76300	Gear Idle Reverse	1
MC68	141-0-5559-08301	Arm Gear Fast Assy	1
MC69	141-2-5519-77200	Gear Fast	1

MECHANISM EXPLODED VIEW



MECHANISM EXPLODED VIEW (Continued)


MZ12
MC51
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MC69
MZ15
MC54
MZ20
MC71
MC72
MZ24
MC52
MZ22
MZ23
MC73
MZ22
MZ23

MECHANISM PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
MC70	141-2-8559-24100	Spring	1
MC71	141-2-3169-36400	Plate	1
MC72	141-2-8539-63400	Spring Click	1
MC73	141-2-8529-51300	Spring Shut Off	1
MZ 1	412 022 7804	SPECIAL SCREW	2
MZ 2	412 020 3006	SPECIAL WASHER	2
MZ 3	412 023 1306	SPECIAL WASHER	2
MZ 4	412 025 7801	SCR FLT PCS 1.4X3.5	4
MZ 5	411 099 7502	SCR FLT PCS 1.4X2.5	6
MZ 6	411 016 9909	SCR FLT PCS 1.4X1.6	7
MZ 7	141-2-4539-17500	Washer, M1.25x3.0x0.25	4
MZ 8	141-2-4539-18100	Washer, M1.6x3.0x0.13	1
MZ 9	412 019 9101	SPECIAL WASHER	1
MZ10	412 022 4506	SPECIAL WASHER	1
MZ11	141-2-4539-26200	Washer, M0.95x2.0x0.25	1
MZ12	411 015 7401	RING E 1.2	14
MZ13	412 023 0408	SCR FLT PCS 1.4X2.5	1
MZ14	141-2-4539-33100	Washer, M1.2x3.0x0.15	2
MZ15	141-2-4539-39200	Washer, M1.25x2.5x0.3	1
MZ16	411 019 3003	SCR PAN PCS 1.4X1.4	1
MZ17	411 019 4505	SCR PAN PCS 1.4X3	1
MZ18	411 017 7805	SCR PAN PCS 1.4X2.5	2
MZ19	141-2-4539-31700	Washer, M1.5x2.2x0.2	1
MZ20	411 019 3201	SCR PAN PCS 1.4X1.6	1
MZ21	412 023 0705	SCR PAN PCS 1.4X2.5	1
MZ22	412 023 2709	SPECIAL WASHER	2
MZ23	412 022 8405	SPECIAL WASHER	3
MZ24	411 017 7300	SCR PAN PCS 1.4X2	2
MZ25	412 023 5908	SPECIAL WASHER	1
MZ26	141-2-4539-18301	Washer, M0.85x2.0x0.13	1

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMPLIFIER P.C.B. ASSY		
PCB1	141-0-1939-30150	Amplifier P.C.B. Assy	1
	141-2-1329-22600	Holder Sensor	1
	141-2-2419-40200	Holder LED	1
	141-2-2899-40200	Adhesive Sheet (for Holder LED)	1
	141-2-2899-56400	Adhesive Sheet (for LED)	1
	141-2-4359-49600	Sheet (Chassis)	1
	141-2-4359-49800	Sheet (Post)	3
	141-2-4469-63000	Spacer	3
J301	4-2352-03140	Ext. Power Jack	1
J302	4-2352-03130	Jack 3P Green (Headphones)	1
S301	4-2319-79320	Slide Switch (Tape Select)	1
S302	4-2319-79320	Slide Switch (DOLBY NR)	1
S303	4-2319-79320	Slide Switch (EBSS)	1
S304	141-2-8539-49200	Spring Switch (Rewind)	1
S305	141-2-8539-49200	Spring Switch (F.FWD)	1
S306	4-2312-06520	Leaf Switch (Power)	1
S307	4-2312-06510	Leaf Switch (Direction)	1
S308	4-2312-06510	Leaf Switch (Dry Cell)	1
P401	4-2229-77411	Potentiometer (B-3k Ω)	1
VR301	4-2229-76690	Volume Control (A-20k Ωx2)	1
HS401	407 100 2901	SENSOR SHS330-50	1
D301	407 089 1407	LED GL2PR9 (BATTERY)	1
IC301	409 136 9305	IC TA7795F(TP1)	1
IC302	409 119 1609	IC TA7793F(TP1)	1
IC303	409 125 6100	IC LA3550M-TP-T1	1
IC304	409 116 1503	IC LA4538M-TP-T1	1
IC401	409 146 7605	IC LB8100M-TP-T1	1
IC402	409 139 5601	IC LB1672M-TP-T1	1
Q301	405 008 7707	TR 2SB815-B7-TA	1
C101	403 074 9502	CERAMIC 680P K 50V	1
C102	403 074 9502	CERAMIC 680P K 50V	1
C103	404 035 1405	TA-SOLID 22U M 4V	1
C104	403 068 2007	CERAMIC 0.022U K 25V	1
C105	403 068 1208	CERAMIC 0.015U K 25V	1
C106	403 089 5308	TA-SOLID 2.2U M 4V	1
C107	403 073 0005	CERAMIC 3300P K 50V	1
C108	403 075 5305	CERAMIC 8200P K 50V	1
C109	403 067 9304	CERAMIC 0.01U K 25V	1
C110	403 090 3201	TA-SOLID 1U M 10V	1
C111	403 091 8809	TA-SOLID 0.47U M 25V	1
C112	403 089 5308	TA-SOLID 2.2U M 4V	1
C113	403 069 1702	CERAMIC 1000P K 50V	1
C114	403 090 3201	TA-SOLID 1U M 10V	1
C115	403 069 1702	CERAMIC 1000P K 50V	1
C116	403 068 0409	CERAMIC 0.1U Z 25V	1
C117	4-2239-71961	Capacitor CD 220M 4V	1
C201	403 074 9502	CERAMIC 680P K 50V	1
C202	403 074 9502	CERAMIC 680P K 50V	1
C203	404 035 1405	TA-SOLID 22U M 4V	1
C204	403 068 2007	CERAMIC 0.022U K 25V	1
C205	403 068 1208	CERAMIC 0.015U K 25V	1
C206	403 089 5308	TA-SOLID 2.2U M 4V	1
C207	403 073 0005	CERAMIC 3300P K 50V	1
C208	403 075 5305	CERAMIC 8200P K 50V	1
C209	403 067 9304	CERAMIC 0.01U K 25V	1
C210	403 090 3201	TA-SOLID 1U M 10V	1
C211	403 091 8809	TA-SOLID 0.47U M 25V	1
C212	403 089 5308	TA-SOLID 2.2U M 4V	1
C213	403 069 1702	CERAMIC 1000P K 50V	1
C214	403 090 3201	TA-SOLID 1U M 10V	1
C215	403 069 1702	CERAMIC 1000P K 50V	1
C216	403 068 0409	CERAMIC 0.1U Z 25V	1
C217	4-2239-71961	Capacitor CD 220M 4V	1
C301	403 069 1702	CERAMIC 1000P K 50V	1
C302	404 035 1405	TA-SOLID 22U M 4V	1
C303	404 035 1405	TA-SOLID 22U M 4V	1
C304	403 067 9809	CERAMIC 0.1U K 25V	1
C305	403 089 5605	TA-SOLID 3.3U M 4V	1
C306	403 067 9809	CERAMIC 0.1U K 25V	1
C307	403 144 0705	TA-SOLID 10U M 4V	1
C308	403 089 6206	TA-SOLID 4.7U M 4V	1
C309	4-2239-71961	Capacitor CD 220M 4V	1
C310	403 144 0705	TA-SOLID 10U M 4V	1
C311	403 089 5605	TA-SOLID 3.3U M 4V	1
C312	404 035 1405	TA-SOLID 22U M 4V	1
C313	403 009 5708	CERAMIC 100P J 50V	1
C314	404 035 1405	TA-SOLID 22U M 4V	1
C401	403 067 9809	CERAMIC 0.1U K 25V	1
C402	404 031 0808	CERAMIC 0.47U Z 50V	1
C403	403 090 3201	TA-SOLID 1U M 10V	1
C404	403 068 0409	CERAMIC 0.1U Z 25V	1
C405	403 089 5605	TA-SOLID 3.3U M 4V	1
C406	403 068 0409	CERAMIC 0.1U Z 25V	1
C407	403 089 5605	TA-SOLID 3.3U M 4V	1
C408	403 089 5605	TA-SOLID 3.3U M 4V	1
C409	403 068 0409	CERAMIC 0.1U Z 25V	1
R101	402 018 4801	MT-GLAZE 18K JA 1/10W	1
R102	402 037 6605	MT-GLAZE 120 JA 1/10W	1
R103	402 018 4900	MT-GLAZE 180K JA 1/10W	1
R104	402 018 6102	MT-GLAZE 3.9K JA 1/10W	1
R105	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R106	402 022 9601	MT-GLAZE 2.7K JA 1/10W	1
R107	402 018 5204	MT-GLAZE 22K JA 1/10W	1
R108	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R109	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R110	402 035 2101	MT-GLAZE 13K JA 1/10W	1
R111	402 023 3202	MT-GLAZE 390K JA 1/10W	1
R112	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R113	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R114	402 018 4108	MT-GLAZE 100K JA 1/10W	1
R115	402 018 5402	MT-GLAZE 3.9 JA 1/10W	1
R116	402 018 6300	MT-GLAZE 47K JA 1/10W	1
R201	402 018 4801	MT-GLAZE 18K JA 1/10W	1
R202	402 037 6605	MT-GLAZE 120 JA 1/10W	1
R203	402 018 4900	MT-GLAZE 180K JA 1/10W	1
R204	402 018 6102	MT-GLAZE 3.9K JA 1/10W	1
R205	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R206	402 022 9601	MT-GLAZE 2.7K JA 1/10W	1
R207	402 018 5204	MT-GLAZE 22K JA 1/10W	1
R208	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R209	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R210	402 035 2101	MT-GLAZE 13K JA 1/10W	1
R211	402 023 3202	MT-GLAZE 390K JA 1/10W	1
R212	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R213	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R214	402 018 4108	MT-GLAZE 100K JA 1/10W	1
R215	402 018 5402	MT-GLAZE 3.9 JA 1/10W	1
R216	402 018 6300	MT-GLAZE 47K JA 1/10W	1
R301	402 018 4801	MT-GLAZE 18K JA 1/10W	1
R302	402 018 3606	MT-GLAZE 0 JA 1/10W	1
R303	402 022 9601	MT-GLAZE 2.7K JA 1/10W	1
R304	402 018 5105	MT-GLAZE 2.2K JA 1/10W	1
R305	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R306	402 037 1607	MT-GLAZE 5.6 JA 1/8W	1
R307	402 037 1607	MT-GLAZE 5.6 JA 1/8W	1
R308	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R309	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R310	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R311	402 018 3606	MT-GLAZE 0 JA 1/10W	1
R312	402 018 3606	MT-GLAZE 0 JA 1/10W	1
R401	402 018 3903	MT-GLAZE 1K JA 1/10W	1

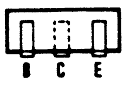
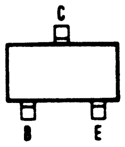
P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R402	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R403	402 018 5501	MT-GLAZE 330 JA 1/10W	1
R404	402 018 4405	MT-GLAZE 12K JA 1/10W	1
R405	402 018 6508	MT-GLAZE 5.6K JA 1/10W	1

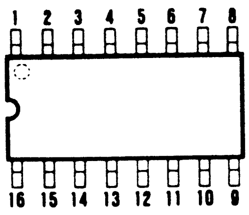
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

IC & TRANSISTOR LEAD IDENTIFICATION

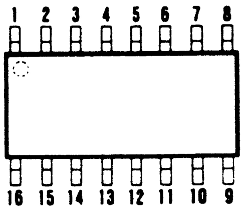
TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SB815		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

TA7795F/TA7793F BOTTOM VIEW



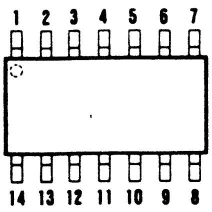
1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9

LB8100M BOTTOM VIEW



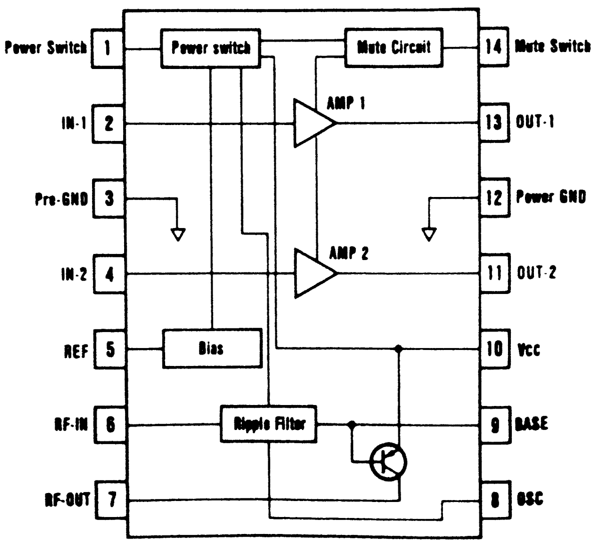
1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9

LA3550M/LA4538M BOTTOM VIEW



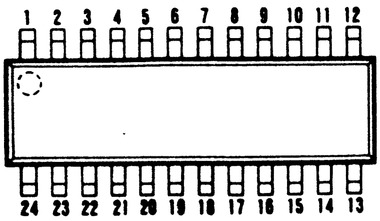
1 2 3 4 5 6 7
14 13 12 11 10 9 8

LA4538M BLOCK DIAGRAM



Power Switch 1
IN-1 2
Pre-GND 3
IN-2 4
REF 5
RF-IN 6
RF-OUT 7
Power switch
Mute Circuit
AMP 1
AMP 2
Bias
Ripple Filter
14 Mute Switch
13 OUT-1
12 Power GND
11 OUT-2
10 Vcc
9 BASE
8 OSC

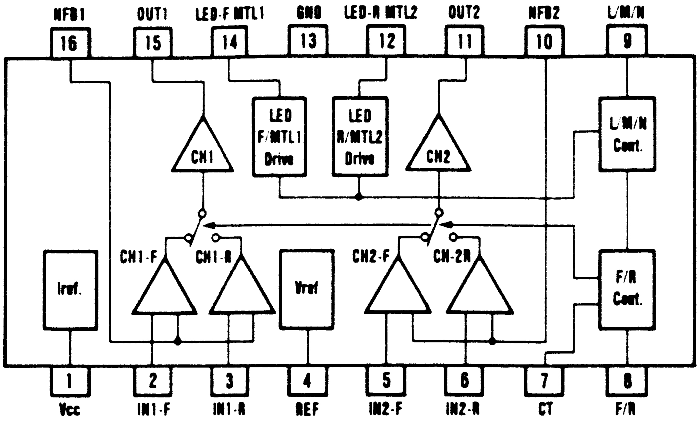
LB1672M BOTTOM VIEW



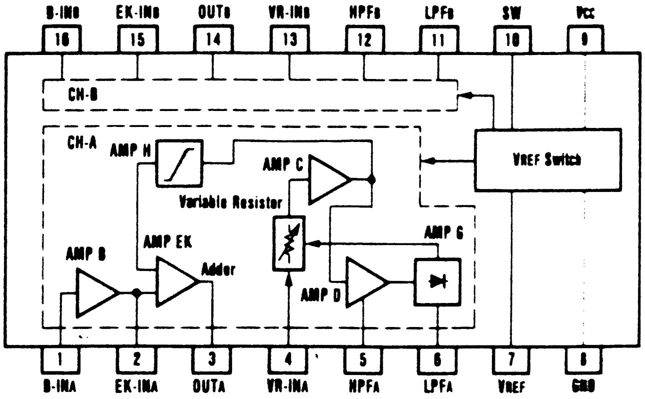
1 2 3 4 5 6 7 8 9 10 11 12
24 23 22 21 20 19 18 17 16 15 14 13

IC & TRANSISTOR LEAD IDENTIFICATION (Continued)

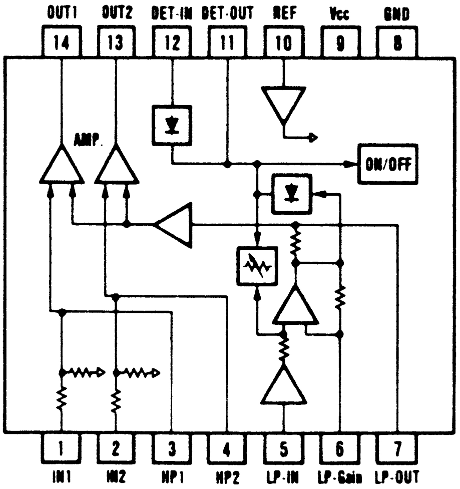
TA7795F BLOCK DIAGRAM


NFB1
OUT1
LED-F MTL1
GND
LED-R MTL2
OUT2
NFB2
L/M/N
16
15
14
13
12
11
10
9
LED F/MTL1 Drive
LED R/MTL2 Drive
CH1
CH2
L/M/N Cont.
CH1-F
CH1-R
CH2-F
CH2-R
Iref.
Vref
F/R Cont.
1
2
3
4
5
6
7
8
Vcc
IN1-F
IN1-R
REF
IN2-F
IN2-R
CT
F/R

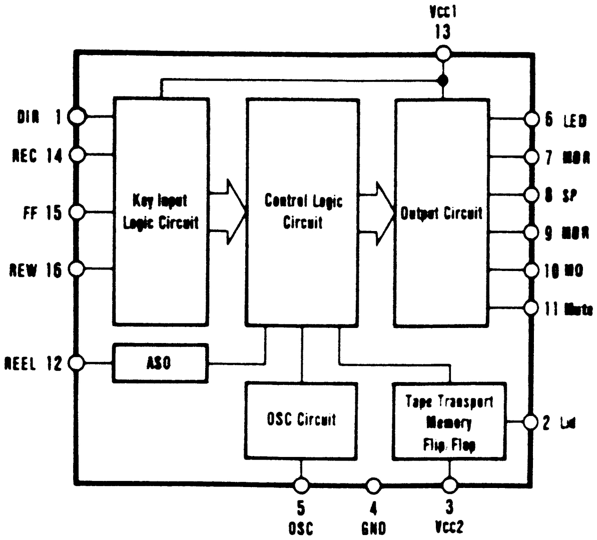
TA7793F BLOCK DIAGRAM


B-INB
EK-INB
OUTB
VR-INB
HPFB
LPFB
SW
Vcc
16
15
14
13
12
11
10
9
CH-B
CH-A
AMP H
AMP C
VREF Switch
Variable Resistor
AMP EK
AMP B
Adder
AMP G
AMP D
1
2
3
4
5
6
7
8
B-INA
EK-INA
OUTA
VR-INA
HPFA
LPFA
VREF
GND

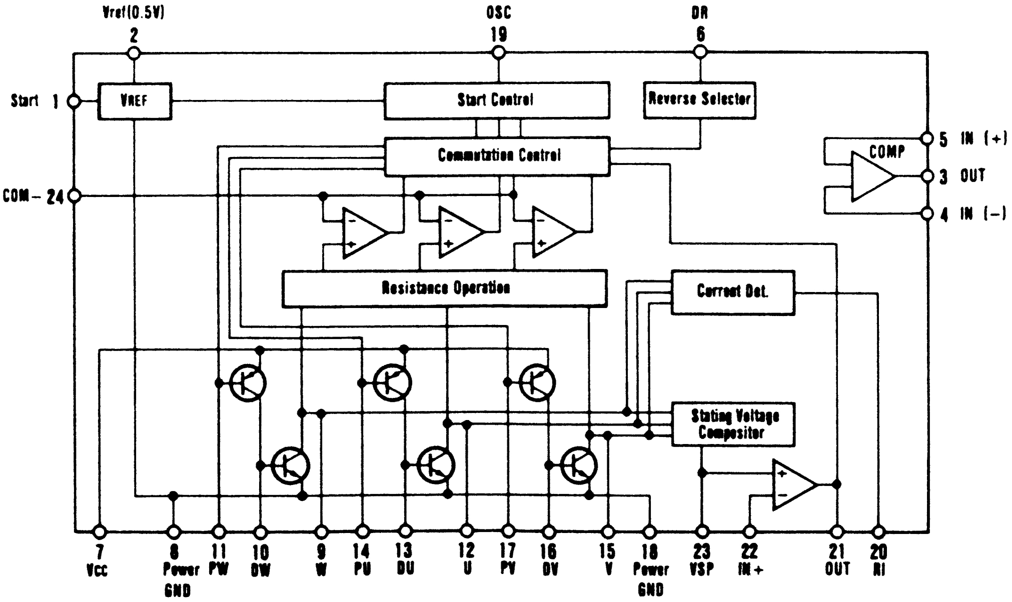
LA3550M BLOCK DIAGRAM


OUT1
OUT2
DET-IN
DET-OUT
REF
Vcc
GND
14
13
12
11
10
9
8
AMP.
ON/OFF
1
2
3
4
5
6
7
IN1
IN2
NP1
NP2
LP-IN
LP-Gain
LP-OUT

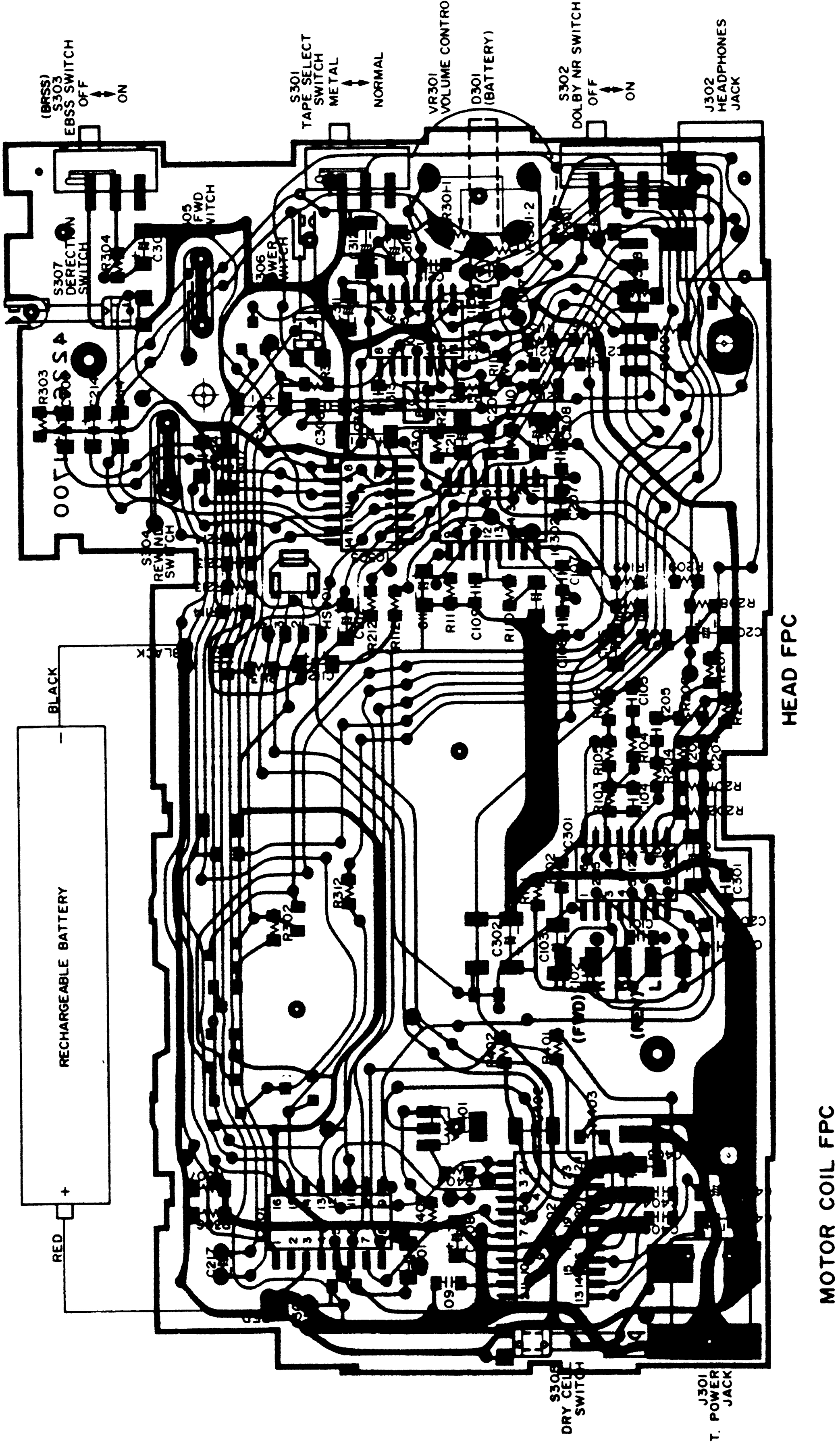
LB8100M BLOCK DIAGRAM


Vcc1
13
DIR 1
REC 14
FF 15
REW 16
REEL 12
Key Input Logic Circuit
Control Logic Circuit
Output Circuit
ASO
OSC Circuit
Tape Transport Memory Flip Flop
6 LED
7 MOR
8 SP
9 MOR
10 MO
11 Mute
2 Lid
5
OSC
4
GND
3
Vcc2

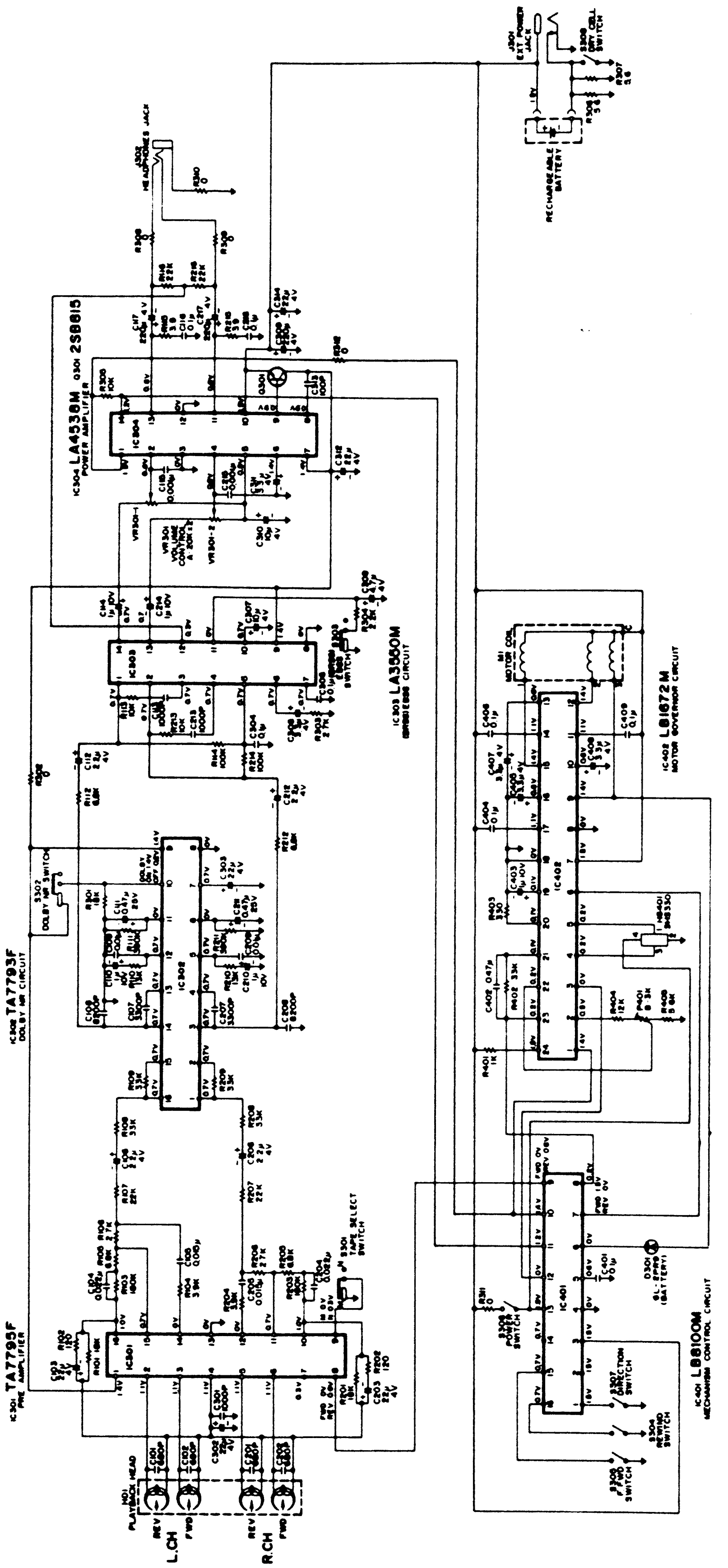
LB1672M BLOCK DIAGRAM


Vref(0.5V)
2
OSC
19
DR
6
Start 1
VREF
Start Control
Reverse Selector
Commutation Control
COM – 24
COMP
5 IN (+)
3 OUT
4 IN (–)
Resistance Operation
Current Det.
Stating Voltage Compositor
7
Vcc
8
Power GND
11
PW
10
DW
9
W
14
PU
13
DU
12
U
17
PV
16
DV
15
V
18
Power GND
23
VSP
22
IN+
21
OUT
20
RI

P.C.BOARD & WIRING DIAGRAM


(BRSS)
S303
EBSS SWITCH
OFF ↔ ON
S301
TAPE SELECT
SWITCH
METAL ↔ NORMAL
VR301
VOLUME CONTROL
D301
(BATTERY)
S302
DOLBY NR SWITCH
OFF ↔ ON
J302
HEADPHONES
JACK
S307
DERECTION
SWITCH
S305
FWD
SWITCH
S306
POWER
SWITCH
S304
REWIND
SWITCH
RECHARGEABLE BATTERY
BLACK
RED
HEAD FPC
MOTOR COIL FPC
S308
DRY CELL
SWITCH
J301
EXT. POWER
JACK
(FWD)
(REV)

SCHEMATIC DIAGRAM


IC301 TA7795F PRE AMPLIFIER
IC302 TA7793F DOLBY NR CIRCUIT
IC303 LA3550M EBSS/BRSS CIRCUIT
IC304 LA4538M POWER AMPLIFIER
Q301 2SB815
IC401 LB8100M MECHANISM CONTROL CIRCUIT
IC402 LB1672M MOTOR GOVERNOR CIRCUIT
H01 PLAYBACK HEAD
L.CH
R.CH
REV
FWD
S301 TAPE SELECT SWITCH
S302 DOLBY NR SWITCH
VR301 VOLUME CONTROL
J302 HEADPHONES JACK
J301 EXT POWER JACK
S308 DRY CELL SWITCH
RECHARGEABLE BATTERY
M1 MOTOR COIL
S306 POWER SWITCH
S307 DIRECTION SWITCH
S304 REWIND SWITCH
S305 F.FWD SWITCH

No.	Name	Position
S301	Tape Select Switch	NORMAL
S302	DOLBY NR Switch	OFF
S303	EBSS/BRSS Switch	OFF
S304	Rewind Switch	OFF
S305	F.FWD Switch	OFF
S306	Power Switch	OFF
S307	Tape Direction Switch	OFF
S308	Dry Cell Switch	OFF

REFERENCE VOLTAGES

IC301

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Forward	1.4	1.1	1.1	1.1	1.1	1.1	–	0	0	1.0	0.7	0	0	0	0.7	1.0
Reverse	〃	〃	〃	〃	〃	〃	–	0.6	〃	〃	〃	〃	〃	〃	〃	〃
Metal	〃	〃	〃	〃	〃	〃	–	〃	0.3	〃	〃	〃	〃	〃	〃	〃

IC302

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Dolby ON	0.7	0.7	0.7	0.7	0.7	0	0.7	0	1.4	1.4	0	0.7	0.7	0.7	0.7	0.7
Dolby OFF	〃	〃	〃	〃	〃	〃	〃	〃	〃	0.2	〃	〃	〃	〃	〃	〃

IC303

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Playback	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0	1.4	0.7	0	0.3	0.7	0.7

IC304

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Playback	1.5	0.8	0	0.8	0.8	1.4	1.4	0.9	0.9	1.5	0.6	0	0.6	1.2

IC401

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Forward	1.5	1.5	1.5	0	0.6	0	0	0.2	0	1.4	1.2	0	1.5	0.7	0.7	0.7
Reverse	〃	〃	〃	〃	〃	〃	1.5	〃	0.6	〃	〃	〃	〃	〃	〃	〃

IC402

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Forward	1.5	0.5	0	0.2	0.2	1.5	1.5	0	1.5	0.6	1.1	1.4	0.6	1.1	1.4
Reverse	〃	〃	〃	〃	〃	0	〃	〃	〃	〃	〃	〃	〃	〃	〃

IC402

	16	17	18	19	20	21	22	23	24
Forward	0.6	1.1	0	0.1	0.1	0.1	0.2	0.2	1.5
Reverse	〃	〃	〃	〃	〃	〃	〃	〃	〃

	Q301		
	B	**C**	**E**
Playback	1.4	0	0

SANYO Electric Co., Ltd.
Osaka, Japan

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